

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004922**Date Inspected:** 09-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Huang Wen Pang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Sub-Assembly Bay 1:

The QA Inspector randomly observed 2 Magnetic Drill Operators drilling bolt holes in U-Ribs U-27, U-28 and U-29 prior to forming.

The QA Inspector randomly observed 4 ZPMC helpers utilizing angle grinders to blend tack welds on Deck Plate 10CW-DP264-001-001 through 010.

The QA Inspector randomly observed ZPMC welders Zhang Li Ping ID 201840/Zhao Cheng Shang ID 059400 and Zhang Shao Wei ID 059403/Jiang Shuang Chen ID 201788, utilizing the Gas Metal Arc Welding (GMAW) Process in 2G Position on Gantry 1 with ZPMC Weld Procedure Specification (WPS)

WPS-B-T-2342-U-1(U-Rib)-4, to weld the U-Ribs to Deck Plate 9AW-DP537-001 Weld Joint (WJ) Numbers 003/004 and 007/008. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 370/378 amps, 31.3/30.9 volts (003/004), 363/368 amps, 31.2/30.9 volts with a travel speed of 525 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

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OBG Sub-Assembly Bay 2:

The QA Inspector randomly observed that no work was being performed for this contract.

OBG Sub-Assembly Bay 3:

The QA Inspector randomly observed ZPMC welders Wei Da Shuai ID 051246 and Li Zhao Qian ID 048810, utilizing the Flux Cored Arc Welding (FCAW) Process in 2F Position on Gantry 2 with ZPMC WPS WPS-B-T-4132, to weld the I-Ribs to Deck Plate DP669-001 at WJ's 001/002 and 005/006. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 309/311 amps, 29.3/29.1 volts (001/002) and 30/307 amps, 29.3/29.6 volts with a travel speed of 350 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Jia Anquan ID 201725, utilizing the Shielded Metal Arc Welding (SMAW) Process in 2F Position with ZPMC WPS WPS-B-T-2112-FCM, to weld the T-Ribs to Bottom Plate BP046-001 at WJ's 018/017. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID's 203206 (WJ's 007/008) and 048920, utilizing the SMAW Process in 2F Position with ZPMC WPS WPS-B-T-2112-FCM, to weld the T-Ribs to Bottom Plate BP073-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 046819, utilizing the SMAW Process in 2F Position with ZPMC WPS WPS-B-T-2112-FCM, to weld the T-Ribs to Bottom Plate BP0181-001 at WJ's 016/015. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 4:

The QA Inspector randomly observed ZPMC Non_Destructive Testing (NDT) Technician Wang Wei, utilizing the Magnetic Particle Testing (MT) Method to examine 100% of the cover passes on the welds on Deck Plates 7EE-DP658-001 (DP658A - Yellow Tag 002320) WJ's 001 through 006, 7CW-DP640-001 (DP640A - Yellow Tag 002321) WJ's 001 through 006, Deck Plate 7EW-DP650-001 (DP650A - Yellow Tag 002319) WJ's 001 through 006 and an excavation per ZPMC B-CWR236 on Edge Plate EP084-001 (EP84A - Yellow Tag 002130) WJ 004. There appeared to be no indications and ZPMC QC accepted the welds on the above listed sub-assemblies.

The QA Inspector performed a 100% final Visual Testing (VT) and 10% MT verification on the cover passes of the fillet welds on Deck Plates 7EE-DP658-001 (DP658A Yellow Tag 002320/Green Tag 002468), 7CW-DP640-001 (DP640A Yellow Tag 002321/Green Tag 002465) and 7EW-DP650-001 (DP650A Yellow Tag 002319/Green Tag 002464) WJ's 001 through 006. There appeared to be no indications and the QA Inspector accepted all the welds on the above listed Deck Plates.

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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, 13764710411, who represents the Office of Structural Materials for your project.

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| Inspected By: | Franco,Charlie | Quality Assurance Inspector |
| Reviewed By: | Wright,Mark | QA Reviewer |
